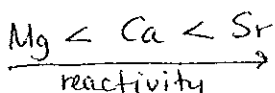
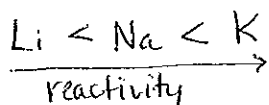


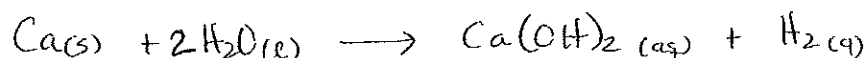
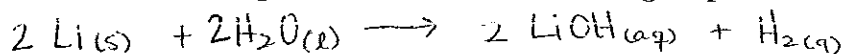
Worksheet #4a

- 1) Observe the reaction that happens when group I and group II metals are added to water. An indicator, phenolphthalein, has been added to the water. If OH^- is formed during the reaction, the indicator will turn purple. Order the group I and group II metals according to their reactivity and compare the reactivity of the group I and group II metals in the same period.



Alkali metals (group IA) are more reactive than alkaline earth metals (group IIA).

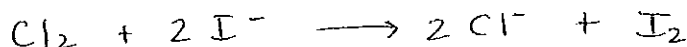
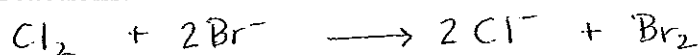
- 2) Write a balanced equation for the reaction of a group I metal with water. Write a balanced equation for the reaction of a group II metal with water.



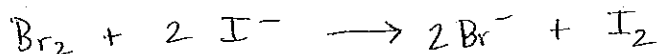
- 3) Observe the color of the halogens Cl_2 , Br_2 , and I_2 in water and in hexane.

halogen	color in water	color in hexane
chlorine	yellow	yellow green
bromine	orange	orange
iodine	brown	purple

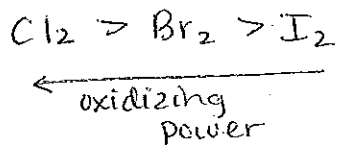
- 4) Halides have the general formula X^- . What happens when bromide and iodide are added to a solution of chlorine? Write a balanced equation for the two reactions.



- 5) What happens when iodide is added to a solution of bromine? Write a balanced equation for this reaction.



- 6) What general conclusions can you draw from the halogen/halide reaction?



The oxidizing power of halogen decreases as we move down a group.